Assess Your Performance
How well did you do? What aspects of filmmaking are you least aware of, and need to develop? What did you accomplish?

PROJECT 5-4: LIGHTING ANALYSIS

Directors do not need to understand the technique of lighting; that is the DP's role. But they do need to know what effect each different lighting setup produces, and what terminology one uses to effectively describe it.

Equipment Required: VCR as in previous projects. It will be helpful to turn down the color control of your monitor so that initially you see a black-and-white picture. Adjust the monitor's brightness and contrast controls so the greatest range of gray tones are visible between video white and video black. Unless you do this you simply won't see all that is present.

Object: To analyze common lighting situations and understand what goes into creating a lighting mood.

Study Materials: Same as in previous project, only this time it will be an advantage to search out particular lighting situations rather than sequences of special dramatic appeal. The same sequences may fulfill both purposes.

LIGHTING TERMINOLOGY

Here the task is to recognize different types and combinations of lighting situations and to apply standard terminology. Every aspect of lighting carries strong emotional associations which can be put to work in drama to great effect. Technique and the terminology to describe it are therefore powerful tools in the right hands. Here are some basic terms:

Types of Lighting Style
High-key picture: The shot looks bright overall with small areas of shadow. In Figure 5-4 the shot is exterior day, and the shadow of the lamppost in the foreground shows that there is indeed deep shadow in the picture. Where shadow is sharp, as here, the light source is called *specular.* A high-key picture can be virtually shadowless so long as the frame is bright overall.

Low-key picture: The shot looks dark overall with few highlight areas. These are often interiors or night shots, but in Figure 5-5 we have a backlit day interior that ends up being low key, that is, having a large area of the frame in deep shadow.

Graduated tonality: The shot has neither bright highlights nor deep shadow but consists of an even, restricted range of midtones. This might be a flat lit interior, like a supermarket, or a misty morning landscape as in Figure 5-6. Here an overcast sky diffuses the lighting source, and the disorganized light rays scatter into every possible shadow area so there are neither highlights nor shadow.

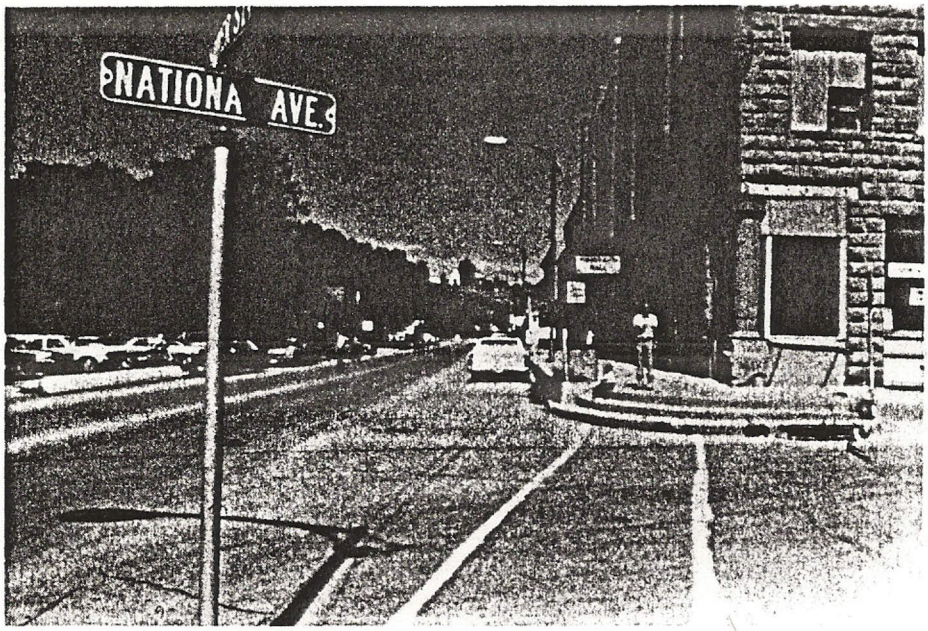


FIGURE 5-4

High-key scene, hard or specular lighting, high contrast. Notice compositional depth in this shot compared with the flatness of Figure 5-5.

FIGURE 5-5

Backlit low-key scene, subject silhouetted against the flare of backlit smoke.

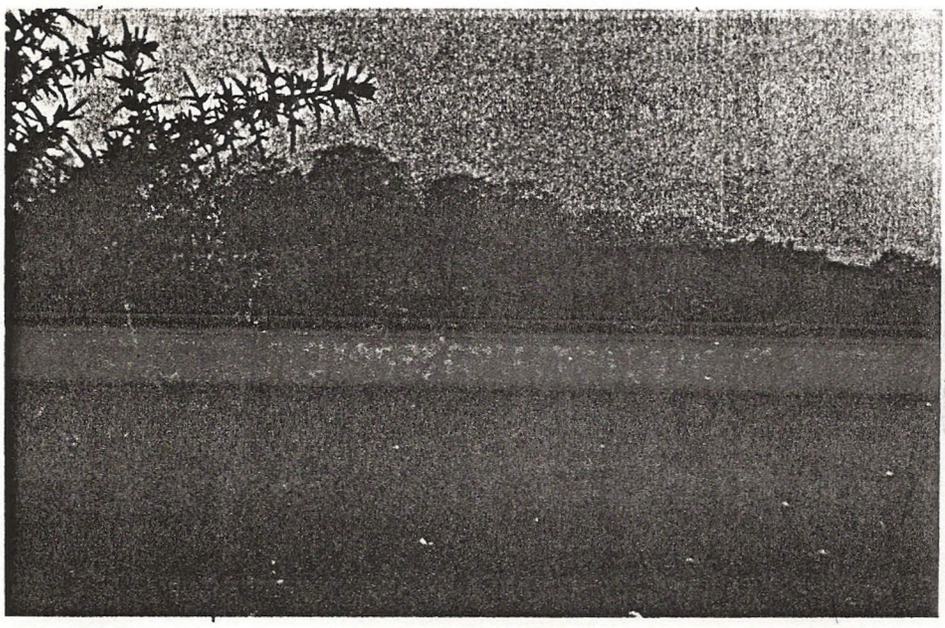


FIGURE 5-6

Graduated tonality scene, low contrast because key light is diffused through morning mist.

Contrast

High-contrast picture: The shot may be lit either high or low key, but there must be a big difference in illumination level between highlight and shadow area, as in Figure 5-7 which has a soot-and-whitewash starkness. Both Figures 5-4 and 5-5 are also high-contrast images although the area of shadow in each is drastically different.

Low-contrast picture: The shot can either be high or low key, but with shadow area illumination level near that of highlight levels. Figure 5-6 is high key, low contrast.

Light Quality

Hard lighting: This is any specular light source creating hard-edged shadows; for example, sun, studio spotlight, or candle flame. These are all called "effectively small" light sources because a small source gives hard-edged shadows. Figure 5-4 is lit by hard light (the sun), while the shadow under the chair in Figure 5-5 is so soft it is hardly discernible.

Soft lighting: Any light source is soft when it creates soft-edged shadows or a shadowless image as in Figure 5-6. Soft light sources are, for example, fluorescent tubes, sunlight reflecting off matte finish wall, light from overcast sky, or a studio soft light.

Names of Lighting Sources

Key light: This is not necessarily an artificial source, for it can be the sun. The key is the light that creates intended shadows in the shot, and these in turn reveal the angle and position of the supposed source light, often relatively hard or specular

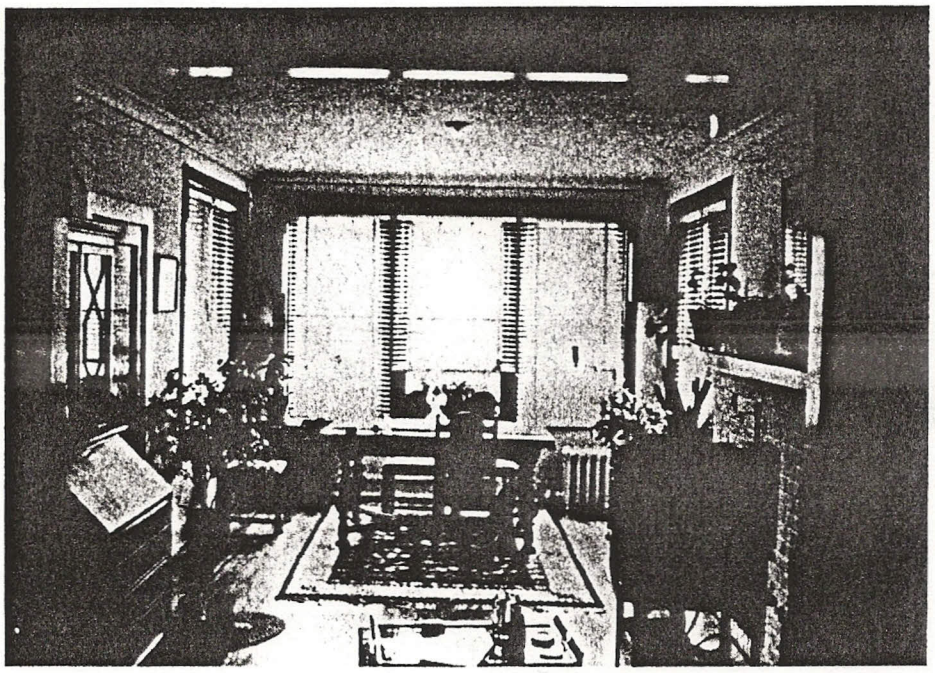


FIGURE 5-7

High-contrast image with very few midtones owing to back lighting and no fill.

(shadow-producing) light. In Figure 5-4 the key light is sunlight coming from rear left and above the camera. In Figure 5-5 it is streaming in toward the camera.

Fill light: This is the light used to raise illumination in shadow area. For interiors it will probably be soft light thrown from the direction of the camera, which avoids creating additional visible shadows. There are shadows, of course, but they are hidden from the camera's view by the subject. Especially in interiors fill light is often provided from matte white reflectors, through diffusion material, or is derived from bounce light, that is, hard light bounced from walls or ceilings to soften it.

Back light: This is light thrown upon a subject from behind, and often from above as well as behind, as in Figure 5-5. A favorite technique in portraiture is to put a rim of light around a subject's head and shoulders to separate them from the background. Rain, fog, dust, or smoke (as in this case of garage barbecuing) all show up best when backlit.

Practical: This is any light appearing in frame as part of the scene; for example, table lamp, overhead fluorescent, or, as in Figure 5-8, the candles on a birthday cake. Usually practicals provide little or no real source of illumination. Here the candles light up the faces, but not the background.

Figure 5-8 illustrates several lighting points. The girl in the middle is lit from below, a style called "monster lighting" and rather eerie for a birthday shot. The girl on the left, having no backlight or background lighting, disappears into the shadows, while the subject on the right is outlined by set light, that is, light falling on the set. The same light source shines on her hair as a backlight source and gives it highlights and texture.

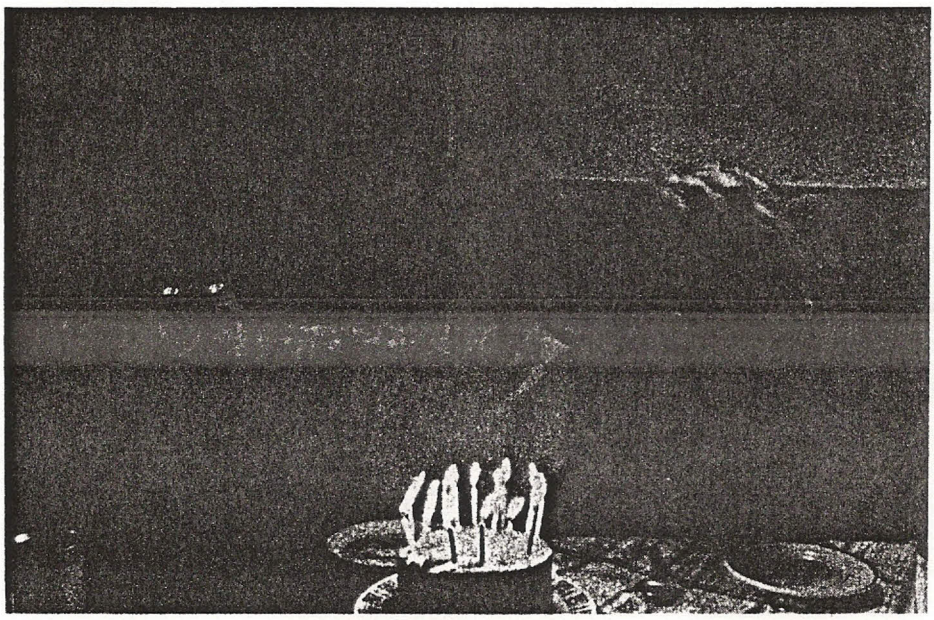


FIGURE 5-8

Practicals are any lights seen in frame, like these birthday candles. Strong set light prevents the background from going dark.

Types of Lighting Setup

Here the illustrations are of the same model lit in various ways. The effect and the mood in each portrait varies greatly as a result. The diagrams show the positioning of the key and fill lights. In a floor plan diagram such as these, one cannot show the height of the shadow-producing light sources, only the angle of throw relative to the camera-to-subject axis. Heights can be inferred from the areas of highlight and their converse, the shadow patterns.

Frontally lit: The key light in Figure 5-9 is so close to the camera-to-subject axis that shadows are thrown backward out of the camera's view. You can see very slight shadows in the folds of the subject's shirt, which show that the key was to the right of camera. Notice how flat and lacking in dimensionality or tension this shot is compared with Figures 5-10 and 5-11.

Broad lit: In Figure 5-10 the key light is some way to the side, so a broad area of the subject's face and body is highlighted. Key light skimming the subject lengthens his face, revealing angles and undulations. There are areas of deep shadow, especially in the eyesockets, but these could be reduced by increasing the amount of soft fill light.

Narrow lit: The key light in Figure 5-11 is to the side of the subject and beyond him, so that only a narrow portion of his face is receiving highlight. The majority of his face is in shadow. This portion of the face is lit by fill light, or we would see nothing. Measuring light reflected in the highlight area and comparing it with that reflected from the fill area gives the lighting ratio. Remember when taking measurements that fill light also reaches highlight areas but not vice versa, so you can only take accurate readings with all the lights on.

Silhouette: Here in Figure 5-12 the subject reflects no light at all, and shows up only as an outline against raw light. This lighting is sometimes used in docu-

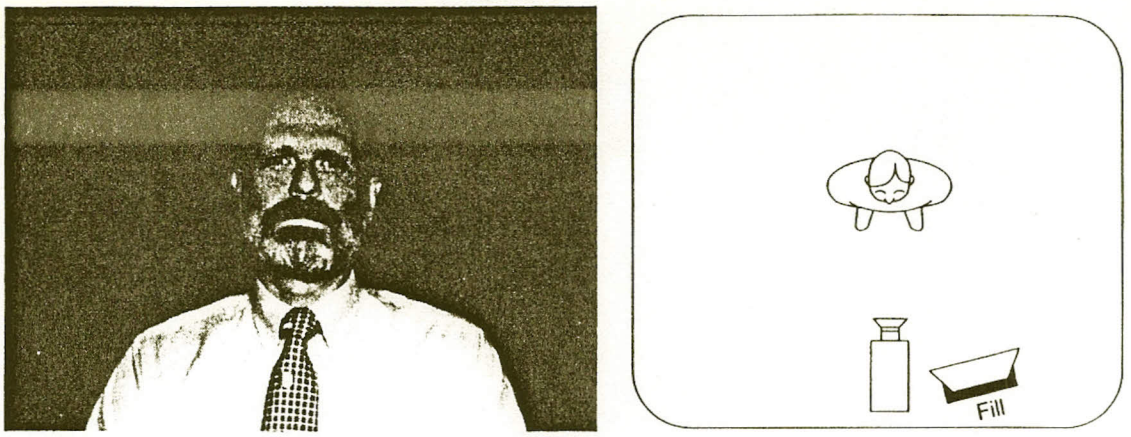


FIGURE 5-9

Frontal lighting: flattens the subject and removes much of the face's interest. Most flash photography is frontal and correspondingly dull.

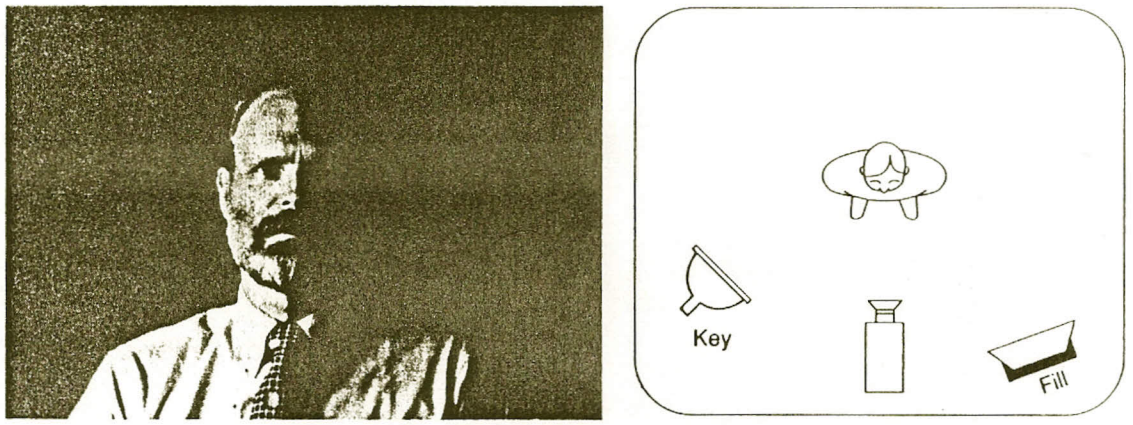


FIGURE 5-10

Broad lighting: illuminates a broad area of the face and shows the head as round and having angularities. Revelation becomes interesting because lighting is selective.

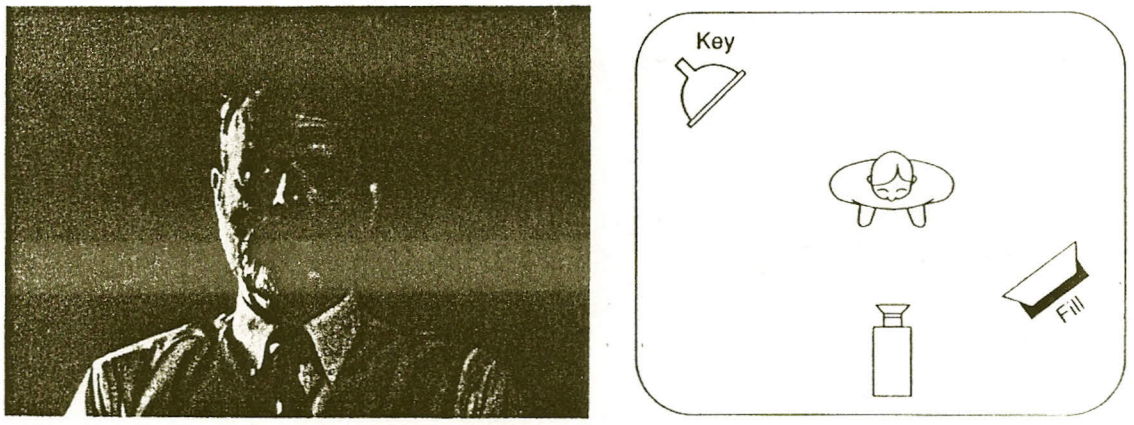


FIGURE 5-11

Narrow lighting: illuminates only a narrow area of the face. More fill used here than in Figure 5-10. The effect is decidedly dramatic.

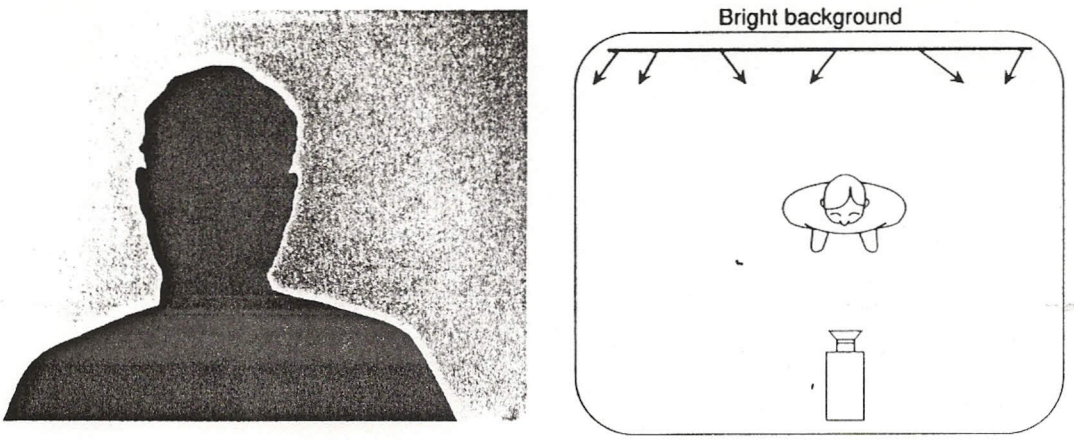


FIGURE 5-12

Silhouette: all light is from the background and none reaches the subject's face.

mentaries when the subject's identity is being withheld. Here it produces the ominous effect of someone unknown confronting us through a bright doorway.

STRATEGY FOR STUDY

Locate two or three sequences with quite different lighting moods, and using the definitions above, classify them as follows:

1. Style: high-key/low-key/graduated tonality?
2. Contrast: high or low contrast?
3. Scene: intended to look like natural light or artificial lighting?
4. Setup: frontal/broad/narrow/back lighting setup?
5. Angles: high/low angle of key light?
6. Quality: hard/soft edges to shadows?
7. Source: source in scene is intended to be _____
8. Practicals: practicals in the scene are _____
9. Time: day for day/night for night/dusk for night/day for night? _____
10. Mood: mood conveyed by lighting is _____
11. Continuity: any differences of lighting to show that wide and close shots can, within limits, be handled differently?

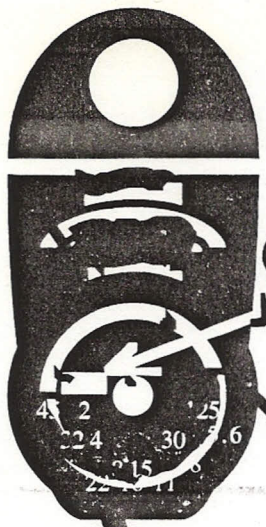
After you have analyzed several different sequences, turn up the color to see if you can spot patterns in its use. These should suggest how the DP (director of photography) sets about interpreting the emotional associations of the location and requirements of the script. Predominant hues and color saturation level (meaning whether a color is pure, or "desaturated" with an admixture of white) have a great deal to do with a scene's effect on the viewer. For instance, Hitch-

cock's *The Trouble with Harry* (1955) places its unwanted, unburied corpse in the serene beauty of autumnal New England. In Louis Malle's *Pretty Baby* (1978) DP Sven Nykvist produces with great economy of means the ruby-shaded opulence of 1917 New Orleans bordellos. Scorsese's *After Hours* (1985) has many threatening night exteriors in New York City, and a lot of dark, "cold" colors.

Two classically lit black-and-white films are Orson Welles' *Citizen Kane* (1941) with cinematography by the revolutionary Gregg Toland, and Jean Cocteau's *Beauty and the Beast* (1946) whose lighting Henri Alekan modeled after Dutch painting, especially its interiors. A much more recent B&W film by Alekan is Wim Wenders' poetic *Wings of Desire* (1987).

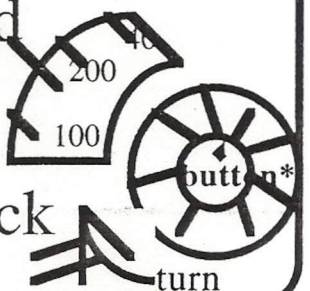
Lightmeters

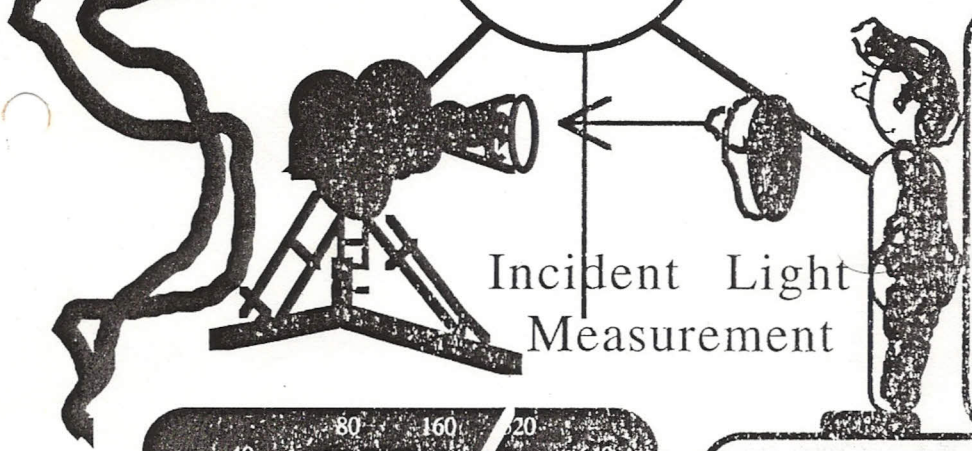
- a quick reminder



Sekonic

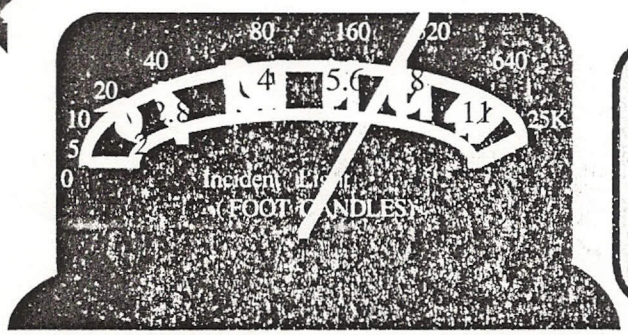
Set Film Speed
- Sensitivity -
ASA Rating
of the film stock





Incident Light
Measurement

Use Lumisphere from the position where the subject is point towards the camera and press button* read needle for footcandle reading.

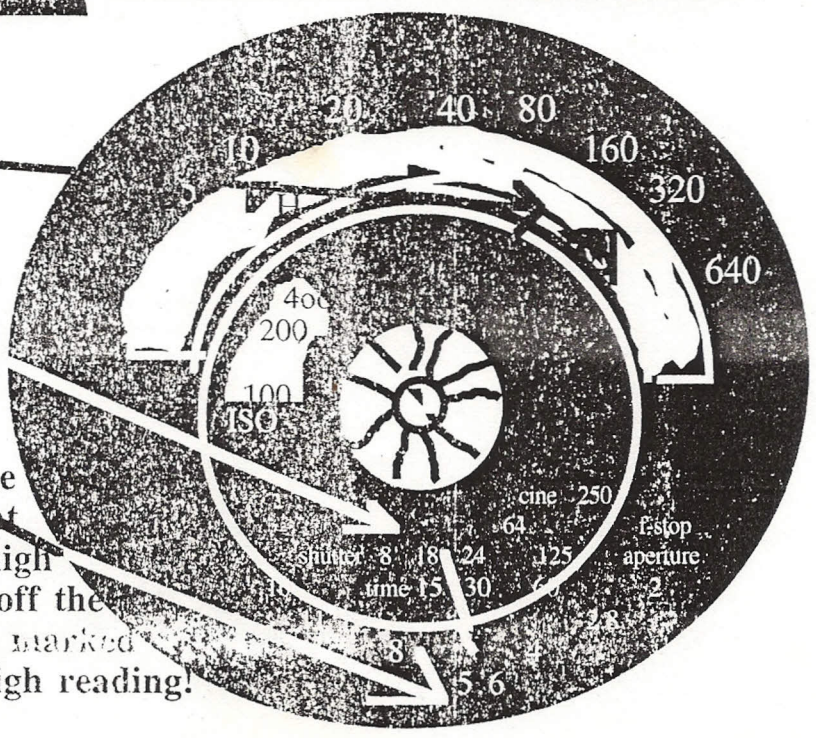
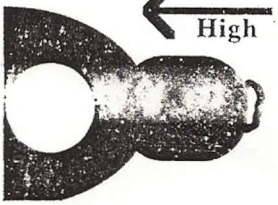


NB The red aperture values are for direct readings using direct slides SO READ OFF THE TOP WHITE FOOTCANDLE FIGURES!

1.set the black triangle against the footcandle scale according to the neadle

2.then read off the cine scale 24/25fps = aprox1/50sec(shutter speed) as applicable

3.and set aperture f-stop accordingly



If needle swings way over to the right then there is bright light so insert the high slide and read off the small red triangle marked H for High slide/High reading!